Legislation

Task Forces and Advisory Panels

Governor's Advisory Drought Planning Panel's Critical Water Shortage Contingency Plan

In response to the commitment in the CALFED Bay-Delta Program's Record of Decision, the Governor convened a panel to develop a "contingency plan to reduce the impacts of critical water shortages primarily for agricultural and urban water users." Panel members met four times between late August and December 2000 to hear informational briefings and to develop the contingency plan. The Panel recommended sixteen actions within broader categories:

- DWR should implement a Critical Water Shortage Reduction Marketing Program, building on experience gained from DWR's past drought water banks. The program would be operated as a water purchasing and allocation program. DWR would acquire options to purchase water from willing sellers and would exercise the options as needed to make water available for sale to water users experiencing critical water shortages.
- DWR should provide technical assistance and educational programs to small water systems and homeowners in rural counties.
- DWR should establish an AB 3030 technical assistance program and update Bulletin 118 to provide improved groundwater data.
- DWR and other CALFED agencies should work in partnership with local water agencies to assist them in developing plans to facilitate integrated management of supplies for agricultural, urban, and environmental purposes.
- DWR should identify and seek funding for research in the areas of long-range weather forecasting, global climate change, and paleoclimatology. DWR should also develop regional hydrologic drought indices to help in statewide monitoring and develop a public outreach program to stress the need for drought preparedness.
- The Governor should take all possible actions to ensure rapid disbursement of Proposition 13 funds and that DWR maximize the use of rants, rather than capitalization loans, to bring local agencies up to the base level of water use efficiency contemplated in the CALFED ROD.

Floodplain Management

- Floodplain management includes actions to the floodplain to reduce losses to human resources within the floodplain and/or protect benefits to natural resources associated with flooding. For example:
- Minimizing impacts of flows
- Maintaining or restoring natural floodplain processes
- Removing obstacles within the floodplain voluntarily or with just compensation
- Keeping obstacles out of the floodplain
- Educating and emergency preparedness planning
- Ensuring that operations of floodwater management systems are not compromised by activities that interfere with, or are damaged by, design floods of these systems.

Stormwater Management Quality Task Force Recommendations

The California Stormwater Quality Task Force was formed in 1989 to assist the State Water Resources Control Board in implementing the NPDES Stormwater Program in California. Some of the task force work products include:

- Revision of California Best Management Practices Handbooks
- Input to regulatory initiatives on pesticides, permitting
- Public education and outreach
- Best management practice guidance

California Floodplain Management Task Force Recommendations

In an effort to reduce the impacts of flooding through better coordination of floodplain management, Assembly Bill 1147 recommended establishment of a Floodplain Task Force. The California Floodplain Management Task Force was established in early 2002 to examine specific issues related to State and local floodplain management. The Task Force, a diverse group of private, non-profit, and local interest groups and State, Federal, and local agencies, created over 30 recommendation for improved floodplain management. Recommendations then grew from three basic themes:

- Better Understanding and Reducing Risks from Reasonably Foreseeable Flooding. Local, State and federal agencies should consider the risk to life and property from reasonably foreseeable floods when making their land use and floodplain management decisions. To do this effectively, decision-makers need better tools and information and specific methods to comply with the federal National Flood Insurance Program (NFIP).
- Multi-Objective Management Approach for Floodplains – Multi-Objective Management Approach for Floodplains. State, local and federal agencies should implement multi-objective floodplain management on a watershed basis. Where feasible, projects should provide adequate protection for natural, recreational, residential, business, economic, agricultural, and cultural resources, and protect water quality and supply.
- Local Assistance, Funding, and Legislation for Floodplain Management. DWR should identify and actively pursue funding opportunities, technical assistance to local governments and other organizations, and legislative proposals to implement Task Force recommendations and ensure successful floodplain management, recognizing that local governments have the primary responsibility and authority for land use decisions.

The Reclamation Board of the State of California endorsed the California Floodplain Management Task Force Report on December 20, 2002. Floodplain use can influence water supply reliability including water quality.

Governor's Commission on Building for the 21st Century

Governor Davis convened a commission to consider the challenge of investing in the infrastructure of California for the 21st Century. The commission was directed to "study the building and infrastructure needs of California, with the intent of identifying existing critical infrastructure needs and developing a comprehensive long-term capital investment plan for financing public building needs, including responsible financial approaches and efficiency improvements." The commission's interim report in August 1999 outlined findings and recommendations for facilities, natural resources, technology and transportation. The commission recommended $3 billion bond money for critical resources including water, parks, and open space.

State Recycling Task Force Recommendations

Assembly Bill 331 would require the Department of water resources to convene the 2002 Recycled Water Task Force with specified membership to advise the department in investigating the opportunities for using recycled water in industrial and commercial applications and in identifying impediments and constraints to increasing the industrial and commercial use of recycled water, and would require a report to the Legislature with recommendations on specified topics not later than July 1, 2003.

Joint Task Force on California Watershed Management Recommendations

- Adopt a Statewide Watershed Policy
- Develop a Strategic Plan
- Improve Technical Assistance & Communication
- Clarify Link to Regulations
- Leverage Multiple funding Sources and Consider Long-Term Funding
- Ensure Watershed Partnerships have Access to Science and Monitoring
- Ensure Public Accountability

The Task Force identified and adopted 26 issues with respective recommendations to address obstacles, impediments, and opportunities for California to increase its recycled water usage. Among the key findings, possibilities of enhanced use of recycled water in landscape irrigation of highway medians, golf courses, parks, and schoolyards; industrial uses such as power station cooling towers, oil refinery boiler feed water, carpet dyeing, recycled newspaper processing, laundries; and agricultural uses such as irrigation of produce, pastures for animal feed, and nursery plant products and in office buildings for toilet flushing would lead to save fresh water. The task force concluded that California has the potential to recycle up to 1.5 million acre-feet per year of water by the year 2030. This could free up freshwater supplies to meet approximately 30 percent of the household water needs associated with projected population growth. However, to achieve that potential, Californians will have to invest nearly $11 billion (approximately $400 million annually) for additional infrastructure to produce and deliver the recycled water.

State Watershed Management Guidelines and Initiative

Assembly Bill 2117 (Wayne, Chapter 735, Statutes of 2000) required a report to the Legislature on California's watershed status and any needed changes in State laws. The State Secretary for Resources and Chair of the State Water Resources Control Board formed the Joint Task Force on California Watershed Management, an interagency and stakeholder effort, to discuss the results of the ten case studies, to refine the findings, and to craft major recommendations to move the State in a new direction to protect and restore watersheds, lakes, rivers and estuaries in California. The Task Force's April 2002 report, Addressing the Need to Protect California's Watersheds: Working with Local Partnerships, contained six major recommendations.

Water Desalination Task Force

This Assembly Bill would require the Department of Water Resources, not later than July 1, 2004, to report to the Legislature, on potential opportunities and impediments for using seawater and brackish water desalination, and to examine what role, if any, the state should play in furthering the use of desalination technology. The bill would require the department to convene a Water Desalination Task

Force, comprised of representatives from listed agencies and interest groups, to advise the department in carrying out these duties and in making recommendations to the Legislature.

The Task force came up with 41 key findings and 29 major recommendations. Among these it was identified that desalination can provide significant value and numerous benefits. These include:

- Providing additional water supply to meet existing and projected demands
- Replacing water lost from other sources and relieving drought conditions
- Enhancing water reliability and supplying high quality potable water
- Reducing groundwater overdraft and restoring use of polluted groundwater
- Replacing water that can be used for river and stream ecosystem restoration

Recent Water Legislation

Legislative changes and programmatic actions within the last five years have provided new definition for planning for improved water supply reliability. In addition to the Water Bonds mentioned earlier, new legislation has focused on local water planning.

Improve Water Management and Integrated Planning

The California Legislature has produced several regulations to improve water management and integrated planning at the local level.

- ***SB 1075 (Johnston, Chapter 583, Statutes of 1998) – Delta Protection Commission.*** Senate Bill 1075 extends the Delta Protection Commission to January 1, 2010, and authorizes the commission to facilitate the implementation of any join habitat-restoration programs within the primary zone of the Delta.

- ***SB 1765 (Peace, Chapter 813, Statutes of 1998) – Colorado River Management Program.*** Senate Bill 1765 appropriates funds to DWR for implementation of the California 4.4 Plan developed by the Colorado River Board and to the Salton Sea Authority for a study. The majority of the funds are for canal lining the All American Canal and the Coachella Branch of the All American Canal.

- ***SB 496 (Sher, Chapter 1016, Statutes of 1999) – Wild and Scenic Rivers: South Yuba River.*** Senate Bill 496 adds the South Yuba River to the State's wild and scenic rivers system. AB 1593 is the companion bill, which delays designation of the South Yuba River for 1 year.

- ***SB 970 (Costa, Chapter 938, Statutes of 1999) – Water Rights.*** Senate Bill 970 enacts the Water Rights Protection and Expedited Short-term Water Transfer Act of 1999 to streamline the administrative process for approval or denial of water transfers by the State Water Resources Control Board and requires general public notice of water transfers.

- ***SB 1062 (Poochigian, Chapter 210, Statues of 1999) - The California Water Plan.*** Senate Bill 1062 requires DWR to include various strategies for meeting the state's water supply needs in its updates to the California Water Plan. The update must identify all federal and state permits, approvals or entitlements that might be required in order to implement the strategies. It also establishes an advisory committee to help DWR update the plan.

- ***AB 1593 (Villaragiosa, Chapter 1017, Statutes of 1999) – Wild and Scenic Rivers: South Yuba River.*** Assembly Bill 1593 designates the South Yuba River as "wild and scenic" to be effective January 1, 2001. This is the companion bill to SB 496.

- ***AB 1147 (Honda, Chapter 1071, Statutes of 2000) – Flood Control.*** Assembly Bill 1147 establishes legislative intent for the Governor to establish a Floodplain Management Task force, provides for greater State oversight of flood control projects, changes the nonfederal cost share equation for flood control projects, and authorizes several flood control projects.

- ***SB 1341 (Burton, Chapter 720, Statues of 2000) - State Water Plan.*** Senate Bill 1341 requires DWR to release a preliminary Draft of the *California Water Plan's* water assumptions and estimates and restructures Water Code Section 10004 relevant to the *California Water Plan*.

- ***SB 221 (Keuhl, Chapter 642, Statues of 2001) - Certification of Sufficient Water Supply*.** Senate Bill 221 requires local agencies to provide written verification that sufficient water supply is available before approving plans for new development.

- ***SB 610 (Costa, Chapter 643, Statues of 2001) - Water Supply Planning***. Senate Bill 610 requires additional information be included as part of an urban water management plan if groundwater is identified as a source of water available to the supplier. It requires an urban water supplier to include in the plan, a description of all water supply projects and programs that may be undertaken to meet total projected water use. In response to SB 221 and SB 610, DWR prepared *The State Water Project Delivery Reliability Report* to assist the SWP contractors in assessment of the adequacy of the SWP component of their overall water supplies. In the near future, DWR will be publishing a guidebook on how cities and counties can comply with Senate Bills 221 and 610.

- ***SB 672 (Machado, Chapter 320, Statues of 2001) - Regional Planning & Water Plan Update***. Senate Bill 672 requires the State to include in the California Water Plan, a report on the development of regional and local water projects, within each hydrologic region to improve water supplies to meet municipal, agricultural, and environmental water needs and minimize the need to import water from other hydrologic regions. This bill also requires urban water suppliers to describe in their urban water management plans, water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

- ***SB 482 (Kuehl, Chapter 617, Statues of 2002).*** Senate Bill 482 was passed to help clear the way for the Colorado River Water Use Plan. Since the Plan could negatively impact some Salton Sea species, SB 482 permits the killing of certain fully protected species found in the Salton Sea.

- ***AB 857 (Wiggins, Chapter 1016, Statues of 2002) - State Strategic Planning.*** Assembly Bill 857 establishes three specific planning priorities for the State:

    1. To promote infill development and equity by rehabilitating, maintaining, and improving existing infrastructure that supports infill development and appropriate reuse and redevelopment of previously developed, underutilized land that is presently served by transit, streets, water, sewer, and other essential services, particularly in underserved areas, and to preserving cultural and historic resources.
    2. To protect environmental and agricultural resources by protecting, preserving, and enhancing the state's most valuable natural resources, including working landscapes such as farm, range, and forest lands, natural lands such as wetlands, watersheds, wildlife habitats, and other wildlands, recreation lands such as parks, trails, greenbelts, and other open space, and landscapes with locally unique features and areas identified by the state as deserving special protection.
    3. To encourage efficient development patterns by ensuring that any infrastructure associated with development that is not infill supports new development that uses land efficiently, is built adjacent to existing developed areas to the extent consistent with the priorities specified pursuant

to subdivision (b), is in an area appropriately planned for growth, is served by adequate transportation and other essential utilities and services, and minimizes ongoing costs to taxpayers.

- ***SB 1938 (Machado, Chapter 603, Statues of 2002) - Groundwater Management Plans.*** Senate Bill 1938 requires a local agency, in order to qualify for state funds, to prepare and implement or consent to be subject to a groundwater management plan, a basinwide management plan, or other integrated regional water management program or plan that addresses five specific groundwater management components described in the bill. SB 1938 amended Water Code section 10750 et seq.

- ***SB 1653 (Costa, Chapter 812, Statutes of 2002) – California Bay-Delta Act.*** Senate Bill 1653 creates the California Bay-Delta Authority. The Authority will sunset on January 1, 2006, unless federal legislation has been enacted authorizing the participation of appropriate federal agencies in the Authority.

- ***SB 1672 (Costa, Chapter 767, Statutes of 2002) - Integrated Regional Water Management Planning.*** Senate Bill 1672 authorizes local public agencies to form regional water management groups and adopt regional plans to address "qualified programs or projects." This bill requires DWR and other departments to give preference to "qualified programs or projects" when establishing criteria for funding under various programs.

- ***AB 2534 (Pavley, Chapter 727, Statutes of 2002) – Watershed, Clean Beaches, and Water Quality.*** Assembly Bill 2534 provides $175 million in Proposition 40 funding as grants to public agencies and nonprofit organizations for projects designed to improve water quality at public beaches, improve water quality monitoring and sewer capability, reduce storm water runoff pollution, improve agricultural water quality and develop and implement local watershed management projects.

- ***AB 2587 (Matthews, Chapter 615, Statues of 2002) – Food: Water Usage Forcasts.*** Assembly Bill 2587 requires the Department of Food and Agriculture to estimate food, fiber, livestock, and other farm products production and provide that information to the Department of Water Resources for estimating related water usage reported in Bulletin 160. The bill also states the intent of the Legislature that the food forecasts include the following considerations:

  1. Neither the state nor the nation should be allowed to become dependent upon a net import of foreign food.
  2. As the nation's population grows, California should produce enough food to supply the state and also continue to supply the historical proportion of the nation's food supply, approximately 25 percent of the nation's table food.
  3. Countries such as Japan are heavily dependent on imported food, some of which comes from California. California is also called upon to ship food to prevent famines and to protect our national interest by providing food to maintain stability elsewhere in the world. Consideration should be given to maintaining the state's ability to meet these export needs.

Recycling, Desalination and Groundwater Potential for Increasing Supplies

- ***AB 303 (Thomson, Chapter 708, Statutes of 2000) – Groundwater.*** Assembly Bill 303 enacts the Local Groundwater Management Assistance Act of 2000 to establish a grant program within DWR to provide funding to local public agencies to implement groundwater monitoring and management activities.

- ***AB 331 (Goldberg, Chapter 590, Statues of 2001) - 2002 Recycled Water Task Force.*** Assembly Bill 331 AB 331 requires DWR to report to the Legislature by July 1, 2003, on opportunities for increasing the use of recycled water in industrial and commercial applications and identify the constraints and impediments to increasing such use. The bill requires DWR to convene the Recycled Water Task Force with specified members who would advise the Department on preparing the report. The bill requires the DWR to carry out the provisions only to the extent that funds from the Safe Drinking Water, Clean Water, Watershed Protection and Flood Protection Act (Proposition 13) are made available by the State Water Resources Control Board.

- ***AB 599 (Liu, Chapter 522, Statues of 2001)—The Groundwater Quality Monitoring Act of 2001.*** Assembly Bill 599 requires the State Water Resources Control Board to integrate existing monitoring programs and design new program elements for the purpose of establishing a comprehensive groundwater quality monitoring program to assess all groundwater basins in the State. This bill requires SWRCB to create an interagency task force to assist SWRCB in designing the monitoring program and requires SWRCB to convene an advisory committee to assist the interagency group. This bill requires a multiagency report to the Governor and the Legislature by January 1, 2002, on the status of implementation of the new law.

- ***SB 1191 (Speier, Chapter 745, Statutes of 2001) –State and Local Reporting Requirements.*** Senate Bill 1191 eliminates specific legislatively mandated reports, which are prepared by the Department.

- ***SB 1518 (Torlakson, Chapter 261, Statutes of 2002) – Recycled Water.*** Senate Bill 1518 allows sanitation districts, after proper notification, to provide recycled water within the boundaries of a city, water district or other local agency that also provides similar water service. This bill requires that specific information about the use of recycled water be added to urban water management plans.

- ***AB 2717 (Hertzberg, Chapter 957, Statues of 2002) – State Desalination Task Force.*** Assembly Bill 2717 requires DWR, not later than July 1, 2004, to report to the Legislature on potential opportunities and impediments for using seawater and brackish water desalination, and to examine what role, if any, the state should play in furthering the use of desalination technology. Rather than accepting the $600,000 appropriation in the bill, Governor Davis reduced the appropriation to $100,000 and directed DWR to explore funding partnerships with interested local and private entities to accomplish the study

Water Allocation, Use and Regulation in California

In California, water use and supplies are controlled and managed under an intricate system of common law principles, constitutional provisions, State and federal statutes, court decisions, and contracts or agreements. All of these components constitute the institutional framework for the protection of public interests and their balance with private claims in California's water allocation and management.

Constitutional, Statutory and Common Law Framework for Water Uses

The people of California own all the water in the State. Water rights provide the right to reasonable and beneficial use of the water, not ownership of the water. Public interests are thus involved at every level of water management in California.

CALIFORNIA CONSITUTION
ARTICLE 10 WATER

SEC. 2. It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste or unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. The right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water. Riparian rights in a stream or water course attach to, but to no more than so much of the flow thereof as may be required or used consistently with this section, for the purposes for which such lands are, or may be made adaptable, in view of such reasonable and beneficial uses; provided, however, that nothing herein contained shall be construed as depriving any riparian owner of the reasonable use of water of the stream to which the owner's land is riparian under reasonable methods of diversion and use, or as depriving any appropriator of water to which the appropriator is lawfully entitled. This section shall be self-executing, and the Legislature may also enact laws in the furtherance of the policy in this section contained.

Principle of Reasonable and Beneficial Use

California's water law and policy, Article X, Section 2 of the California Constitution, requires that all uses of the State's water be both reasonable and beneficial. It places a significant limitation on water rights by prohibiting the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water. However, the interpretation of what is wasteful can vary significantly depending on the circumstances and may depend on opinions of the SWRCB or ultimately, the courts.

Public Trust Doctrine Values and Trustees

Rights to use water are subject to the State's obligation under the Public Trust Doctrine as trustee of certain resources for Californians. The Public Trust Doctrine is a legal doctrine that imposes responsibilities on State agencies to protect trust resources associated with California's waterways, such as navigation, fisheries, recreation, ecological preservation and related beneficial uses. In National Audubon Society v. Superior Court of Alpine County, the California Supreme Court concluded that the public trust is an affirmation of the duty of the State to protect the people's common heritage of streams, lakes, marshlands, and tidelands, surrendering such protection only in rare cases when the abandonment of that right is consistent with the purposes of the trust. Thus, California agencies have fiduciary obligations to the public when they make decisions affecting trust assets.

In National Audubon, the court addressed the relationship between the Public Trust Doctrine and California's water rights system, and integrated them. The Court reached three major conclusions:

- The State retains continuing supervisory control over its navigable waters and the lands beneath them. This prevents any party from acquiring a vested right to appropriate water in a manner harmful to the uses protected by the public trust. The State Water Resources Control Board may reconsider past water allocation decisions in light of current knowledge and current needs.
- As a practical matter, it will be necessary for the State to grant usufructuary licenses to allow appropriation of water for uses outside the stream, even though this taking may unavoidably harm the trust uses of the source stream.
- "The State has an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible."

Thus, while the State may, as a matter of practical necessity, have to approve appropriations that will cause harm to trust uses, it "must at all times bear in mind its duty as trustee to consider the effect of such taking on the public trust, (cite omitted) and to preserve, so far as consistent with the public interest, the uses protected by the trust."

Surface Water Rights

California's system for surface water rights recognizes both riparian rights and appropriative rights. Riparian rights were adopted in California as a part of the English Common Law when California became a state in 1850. At that time, gold miners were already operating under their own system that recognized claims to water rights based on prior appropriation.

Riparian

A riparian right is the right to divert, but not store, a portion of the natural flow for use based on the ownership of property adjacent to a natural watercourse. Water claimed through a riparian right must be used on the riparian parcel. Such a right is generally attached to the riparian parcel of land except where a riparian right has been preserved for non-contiguous parcels when land is subdivided. Generally, riparian rights are not lost through non-use. All riparian water users have the same priority; senior and junior riparian water rights do not exist. During times of water shortage, all riparian water users must adjust their water use to allow equal sharing of the available water supply.

Appropriative

Under the prior appropriation doctrine, a person may acquire a right to divert, store, and use water regardless of whether the land on which it is used is adjacent to a stream or within its watershed. The rule of priority between appropriators is "first in time is first in right." A senior appropriative water rights holder may not change an established use of the water to the detriment of a junior, including a junior's reliance on a senior's return flow. Acquisition of appropriative water rights is subject to the issuance of a permit by the State Water Resources Control Board (SWRCB) with priority based on the date a permit is issued. Permit and license provisions do not apply to pre-1914 appropriative rights (those initiated before the Water Commission Act took effect in 1914), but pre-1914 rights are still subject to reasonable and beneficial use. Appropriative rights may be sold or transferred.

Groundwater Use and Management

With the exception of the 19 adjudicated groundwater basins and basins in which a local agency has obtained statutory authority to manage groundwater, any overlying landowner in California has the right to build a well and extract groundwater as long as that groundwater is put to a reasonable and beneficial use. In 1903, the California Supreme Court rejected the English Common Law system of absolute

ownership of groundwater, which allowed for unregulated pumping of groundwater. Instead, the court adopted the rule of "reasonable use of percolating waters." This established the doctrine of “correlative rights and reasonable use” under which every landowner in the basin has a right to extract and use groundwater and that right is correlative with the rights of all the overlying landowners in the basin. Those correlative rights are not quantified until the basin is adjudicated. An overlying landowner’s right is considered to be analogous to a riparian right to surface water. Groundwater can be appropriated by taking the water for use on non-overlying lands if water is surplus to the reasonable needs of overlying owners.

California does not have a statewide management program or permit system to regulate the extraction and appropriation of groundwater. Courts have recognized that groundwater management is the responsibility of local agencies. In addition to the 19 adjudicated basins in which groundwater extraction is regulated by the watermaster appointed by State or federal courts, some local agencies have obtained statutory authority from the legislature to manage groundwater within their agency’s boundaries. Statutory management may be granted to a public agency that also manages surface water, or to a groundwater management agency created expressly for that purpose by a special district act. There are 9 such special districts, but most have not successfully developed groundwater management plans. Several other local agencies have obtained statutory authority to manage groundwater by returning to the legislature and requesting amendments to the Water Code to allow them to manage groundwater. Only a few of these agencies have enacted a groundwater replenishment fee, a groundwater extraction fee, or a recharge fee, all of which are colloquially called a “pump tax.” Water resources are specifically referenced in general plan statutes and mandate close coordination of land use and water supply agencies. More recently, some counties have enacted ordinances that are aimed primarily at protecting groundwater resources within their county.

In 1991, the Water Code was amended by AB 255 to allow local water agencies overlying critically overdrafted groundwater basins to develop groundwater management plans. Seven local agencies adopted plans pursuant to that authorization. In 1992, the Water Code was again amended by AB 3030, which authorized water agencies in any groundwater basin to develop a groundwater management plan, if the groundwater was not subject to management under other provisions of law or a court decree. Plans adopted pursuant to the 1992 statute may include, but are not limited to, 12 technical components including control of salt water intrusion; identification and protection of wellhead and recharge areas; regulation of the migration of contaminated water; provisions for abandonment and destruction of wells; mitigation of overdraft; replenishment; monitoring; facilitating conjunctive use; identification of well construction policies; and construction of cleanup, recharge, recycling, and extraction projects by the local agency. About 190 agencies have adopted groundwater management plans in accordance with AB 3030.

The same part of the Water Code (section 10750 et seq.) was amended again in 2002 by SB 1938 and now requires that 5 specific components must be included in a groundwater management plan if the agency applies for State funding made available after September 1, 2002. Even if an agency does not apply for State funding, however, the legislature’s intent was to provide standards for groundwater management by prudent groundwater managers. Applicant agencies for funding authorized by AB 303 (Thomson, Chapter 708, Statues of 2000) are specifically excluded from the required components in that such funding was intended by the legislature to enable under funded local agencies to begin a

groundwater management program. Again, however, a prudent manager would strive to meet minimum standards.

Tribal Water Rights

Some Indian reservations and other federal lands have reserved water rights implied from acts of the federal government, rather than state law. When tribal lands were reserved, their natural resources were also reserved for tribal use. Since reserved tribal rights were generally not created by state law, states' water allocations did not account for tribal resources. In the landmark Winters v. U.S. case, in 1908 the U.S. Supreme court established that sufficient water was reserved to fulfill the uses of a reservation at the time the reservation was established. The decision, however, did not indicate a method for quantifying tribal water rights. Winters rights also retain their validity and seniority over state appropriated water whether or not the tribes have put the water to beneficial use. Only after many years did tribes begin to assert and develop their reserved water rights. In 1963 the U.S. Supreme Court decision Arizona v. California reaffirmed Winters and established a quantification standard based on irrigation, presupposing that tribes would pursue agriculture. Despite criticisms of the "practicably irrigable acreage" (PIA) quantification standard from various perspectives, the PIA standard provided certainty to future water development. Quantifying water needs in terms of agricultural potential does not accurately show the many other needs for water. Even urban water quantity and quality assessments that look at the adequacy of the domestic water supply and sanitation do not provide a complete picture of tribal water needs. A large part of the tribal water needs are for instream flows and other water bodies that support environmental and cultural needs for fishing, hunting, and trapping.

The 1902 Reclamation Act promulgated the establishment of irrigated agriculture and settlement throughout the Western states. Historical perspective indicates this policy was pursued generally without regard to Indian water rights or the 1908 Winters decision. In 1952 Congress passed the McCarran Amendment allowing the federal government to waive sovereign immunity and participate in state general stream adjudications. The Court later ruled that state adjudications may also apply to Indian reserved water rights held in trust by the United States. In asserting their Winters rights, tribes have come into conflict with water-using development that grew out of substantial federal and private investment. Costly litigation, negotiation, or combinations thereof are the usual means of resolving Indian water disputes, and some cases can take decades to reach agreement. Some tribes request assistance from the federal government to pursue their water rights settlements, reminding concerned parties of the conflicting roles the federal government can assume on two or more sides of a judicial or administrative issue.

The Law of the River

The Colorado River is managed and operated under numerous compacts, federal laws, court decisions and decrees, contracts, and regulatory guidelines collectively known as the "Law of the River." In 1922, the seven Colorado River basin states negotiated the Colorado River Compact, which divided the states into two basins—upper and lower—and apportioned 7.5 million acre-feet per year to each basin. The compact also referenced Mexico's right to the Colorado. The Boulder Canyon Project Act of 1928 ratified the Compact and established California’s apportionment at 4.4 maf/year. In 1944, the United States signed a water treaty in which it agreed to deliver an annual quantity of 1.5 million acre-feet of water annually to Mexico.

While compact negotiators estimated the flow of the river to be at least 17 million acre-feet per year, today's records indicate a flow of 15 million at Lee Ferry, just below Lake Powell. Consequently, the sum of the actual compact apportionments and the Mexican treaty exceed the flow of the river in most years.

Water Contracts

Both the SWP and CVP have contracts to deliver water to water agencies:

State Water Project

DWR has long-term water supply contracts for water service from the State Water Project with 29 local agencies from Plumas County Flood Control and Water Conservation District in the north to the Metropolitan Water District of Southern California in the south. In return for State financing, constructing, operating, and maintaining facilities needed to provide water service, the agencies contractually agreed to repay all associated SWP capital and operating costs. The Annual Table A represents the total amount of project water that a SWP contractor may request each year, according to that contractor's long-term water supply contract. Depending on hydrologic conditions, the actual delivery may be different than the requested amount. The majority of the SWP goes to urban uses. As a result of amendments to contracts in the 1990s, the current combined maximum annual Table A amount totals 4,172,786 acre-feet for all 29 contractors. The contracts are in effect for the longest of the following periods: (1) the project repayment period, which extends to the year 2035; (2) 75 years from the date of the contract; or (3) the period ending with the latest maturity date of any bond used to finance the construction costs of project facilities.

Central Valley Project

The CVP supplies water to more than 250 long-term water contractors extending from Shasta County in the north to Kern County in the south. The majority of the CVP water goes to agricultural uses. Collectively, the contracts call for a maximum annual delivery of 9.3 MAF; 4.8 MAF is classified as project water and 4.5 MAF is classified as water right settlement water. Contractors that receive project water repay project capital and operation and maintenance costs. Water right settlement water is water covered in agreements with water rights holders whose diversions existed before the project was constructed. Project operations altered natural river flow upon which these pre-project diverters had relied, so contracts were negotiated to agree on the quantities of diversions that could be made without any payment to the United States. Water rights settlement contractors on the upper Sacramento River receive their supply from natural flow and storage regulated at Shasta Dam. Settlement contractors on the San Joaquin River (called exchange contractors) receive Delta water diverted from the Delta and stored in San Luis Reservoir and/or pumped directly via the Delta-Mendota Canal.

Releases of Water for Environmental Uses

Fish and Game Code Section 5937 provides protection to fisheries by requiring that the owner of any dam allow sufficient water to pass downstream to keep in good condition any fisheries that may be planted or exist below the dam. See the adjoining page for other resource management regulations. See the adjoining page for other environmental regulations.

Water Transfers

Every year, hundreds of water transfers take place between water users within water districts. These districts have their own rules for the initial allocation of water to their users. Water transfers between water districts within the same water basin are becoming more common. Local rules allow districts to transfer water through groundwater banking agreements or other joint water development projects. In

many cases, local rules provide members the right of first refusal to obtain the water before the water is transferred to outside parties. Emergency water transfers are generally exempt from CEQA review.

In 1995 and 1996, the SWP negotiated a set of principles (Monterey Agreement), which among other things, changed the operating rules of the SWP to allow banking and limited water transfers among SWP users. Based on these principles and a final EIR, twenty-seven of the 29 SWP contractors executed the amendment (Monterey Amendment) to their contracts. Based on challenges to the EIR, DWR is preparing a new EIR for the Monterey Amendment.

CVPIA authorized transfer of project water outside the CVP service area, subject to many conditions, including a right of first refusal by entities within the service area. Transfers must be consistent with State law, be approved by USBR, and be approved by the contracting water district if the transfer involves more than 20 percent of its long-term contract supply. USBR has published interim guidelines for administration of this provision, pending formal promulgation of rules and regulations.

In the mid-1980s and 1990s, the Legislature passed several laws making it easier to transfer water beyond the boundaries of historical water service areas. These laws are aimed at protecting water users who are not a party to the transfer and fish and wildlife from being injured or unreasonably affected by the transfer. These laws developed an expedited process for the SWRCB to expand the water rights of those conducting a short-term (one year) water transfer. The process requires SWRCB to make findings within 45 days. Once the findings are made, the water right is modified to allow the water right holder to serve, on a temporary basis, additional places of use or to use alternative points of diversion. The receiving party gets the use of the water, but does not obtain any rights to the water; the water rights are maintained by the original water right holder.

CALFED included actions to facilitate water transfers. The ON TAP website provides information and disclosure of water market information resources for water users. (See http://ontap.ca.gov).

DWR purchases water for the newly created Environmental Water Account and the Dry Year Program for California. DWR has made it clear in recent water transfer papers that it only will be involved in the purchase of water from willing sellers who include in their proposals monitoring and mitigation programs that resolve possible impacts to other water users and fish and wildlife; see www.watertransfers.water.ca.gov. DWR has evaluated its role as a water purchaser in light of the legislative guidance provided in the Water Code regarding water transfers. Through this evaluation DWR has defined the nature of the water it wishes to purchase in much the same way that any consumer in the marketplace decides the nature of the products to be purchased. These definitions are seen as a step toward creating a more equitable water market that addresses early in the process the impacts to third parties. These same issues and the development of mechanisms to resolve them are part of a settlement process between northern California water users, the CVP, and the SWP regarding the role northern California should play in making water available to assist in meeting water quality standards in the Delta.

Area of Origin Protections

During the years when California's two largest water projects, the CVP and SWP, were being planned and developed, area of origin provisions were added to the water code to protect local Northern California supplies from being depleted by the projects. County of origin statutes reserve water supplies for counties in which the water originates when, in the judgment of the SWRCB, an application for the assignment or

release from priority of State water right filings will deprive the county of water necessary for its present and future development. Watershed protection statutes are provisions that require that the CVP and the SWP not deprive those in a watershed from the future beneficial water needs.

The Delta Protection Act, enacted in 1959 (not to be confused with the Delta Protection Act of 1992), declares that the maintenance of an adequate water supply in the Delta to maintain and expand agriculture, industry, urban, and recreational development in the Delta area and provide a common source of fresh water for export to areas of water deficiency is necessary for the peace, health, safety, and welfare of the people of the State, and is subject to the County of Origin and Watershed Protection laws. The act requires the SWP and the CVP to provide salinity control in the Delta and an adequate water supply for water users in the Delta.

In 1984, additional area of origin protections were enacted covering the Sacramento, Mokelumne, Calaveras, and San Joaquin Rivers; the combined Truckee, Carson, and Walker Rivers; and Mono Lake. The protections prohibit the export of groundwater from the combined Sacramento River and Delta Basins, unless the export is in compliance with local groundwater plans.

Regulations Protecting Water Quality

Water quality is an important aspect of water resource management. Discussed below are the key State and federal laws governing water quality.

Clean Water Act-National Pollutant Discharge Elimination System

Section 402 of the Clean Water Act established a permit system known as the National Pollutant Discharge Elimination System (NPDES) to regulate point sources of discharges in navigable waters of the United States. The EPA was given the authority to implement the NPDES, although the Act also authorizes states to implement the NPDES program in lieu of the EPA, provided the state has sufficient authority.

After the Clean Water Act was enacted in 1972, US EPA and the states focused primarily on implementing technology-based controls for “point” sources (for example, discharges from pipes from factories and municipal sewage treatment plants). Today, those controls are largely in place, and the focus is beginning to shift to “non-point source” pollution, such as runoff from cities and farms.

Porter-Cologne Water Quality Control Act

This Act is California's comprehensive water quality control law and is a complete regulatory program designed to protect water quality and beneficial uses of the State's water.

The Act requires the adoption of water quality control plans by the State's nine RWQCBs for watersheds within their regions. These plans are nominally reviewed and updated triennially, and their adoption is subject to the approval of the SWRCB and ultimately the federal EPA. Moreover, pursuant to Porter-Cologne, these basin plans shall become part of the California Water Plan, when such plans have been reported to the Legislature (Section 13141, California Water Code).

In 1972, the Legislature amended the Porter-Cologne Act to give California the authority and ability to operate the federal NPDES permits program. Before a permit may be issued, Section 401 of the Clean

Water Act requires that the RWQCB certify that the discharge will comply with applicable water quality standards. In addition, under Porter-Cologne, the RWQCB may also issue waste discharge requirements, that set conditions on the discharge of a waste. These requirements must be consistent with the water quality control plan for the body of water that receives the waste discharge, as well as protect the beneficial uses of those receiving waters.

The regional boards also implement Section 402 of the federal Clean Water Act, which allows the State to issue a single discharge permit for stormwater runoff for the purposes of both State and federal law.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), enacted in 1974 and significantly amended in 1986 and 1996, directed the EPA to set national standards for drinking water quality. It required the EPA to set maximum contaminant levels for a wide variety of constituents. Local water suppliers are required to monitor their water supplies to assure that regulatory standards are not exceeded.

The Maximum Contaminant Level (MCL) is the maximum concentration of a contaminant that is allowed in public drinking water systems. The 1986 amendments set a timetable for the EPA to establish standards for specific contaminants and increased the range of contaminants local water suppliers were required to monitor to include contaminants that did not yet have an MCL established. The 1986 Safe Drinking Water Act Amendments also led to the EPA's adoption of the Surface Water Treatment Rule, which addresses filtration and disinfection of surface waters. The amendments included a wellhead protection program, a grant program for designating sole-source aquifers for special protection, and grant programs and technical and financial assistance to small systems and states.

The 1996 amendments included stronger regulation of microbial contaminants (i.e. Cryptosporidium) while managing levels of disinfection byproducts, source water assessment programs, and establishment of a drinking water state revolving fund. The source water assessment and protection programs offer tools and opportunities to build a prevention barrier to drinking water contamination. Under SDWA, the state is required to develop comprehensive Source Water Assessment Programs that will identify the areas that supply public tap water, inventory contaminants and assess water system susceptibility to contamination, and inform the public of the results.

For every new standard, EPA conducts an analysis to determine if the benefits of the standard justify the costs. If not, EPA may adjust the MCL to a level that "maximizes the health risk reduction benefits at a cost that is justified by the benefits."

California Safe Drinking Water Act

In 1976, California enacted its own Safe Drinking Water Act, requiring DHS to regulate drinking water, including: setting and enforcing federal and State drinking water standards; administering water quality testing programs; and administering permits for public water system operations. In 1989, significant amendments to the California act incorporated the new federal safe drinking water act requirements into California law, gave DHS discretion to set more stringent MCLs, and recommended public health levels for contaminants.

Environmental Laws for Protecting Resources

Several laws outline the State and federal obligations to protect and restore degraded habitats and species.

Protecting Endangered Species and Habitats

Federal Endangered Species Act

Under the federal ESA, an endangered species is one that is in danger of extinction in all or a significant part of its range, and a threatened species is one that is likely to become endangered in the near future. The ESA is designed to preserve endangered and threatened species by protecting individuals of the species and their habitat and by implementing measures that promote their recovery. The ESA sets forth a procedure for listing species as threatened or endangered. Final listing decisions are made by USFWS or NMFS.

Once a species is listed, Section 7 of the act requires that federal agencies, in consultation with the USFWS or NMFS, ensure that their actions do not jeopardize the continued existence of the species or habitat critical for the survival of that species. The federal wildlife agencies are required to provide an opinion as to whether the federal action would jeopardize the species. The opinion must include reasonable and prudent alternatives to the action that would avoid jeopardizing the species' existence. Federal actions subject to Section 7 include issuance of federal permits such as the dredge and fill permit required under Section 404 of the federal Clean Water Act, which requires that the project proponent demonstrate that there is no feasible alternative consistent with the project goals that would not affect listed species. Mitigation of the proposed project is not considered until this hurdle is passed.

State agencies and private parties also are subject to the ESA. Section 9 of the ESA prohibits the "take" of endangered species and threatened species for which protective regulations have been adopted. Take has been broadly defined to include actions that harm or harass listed species or that cause a significant loss of their habitat. State agencies and private parties are generally required to obtain a permit from the USFWS or NMFS under Section 10(a) of the ESA before carrying out activities that may incidentally result in taking listed species. The permit normally contains conditions to avoid taking listed species and to compensate for habitat adversely impacted by the activities.

California Endangered Species Act

The California Endangered Species Act is similar to the federal ESA. Listing decisions are made by the California Fish and Game Commission. All State lead agencies are required to consult with the Department of Fish and Game about projects that impact State listed species. DFG is required to render an opinion as to whether the proposed project jeopardizes a listed species and to offer alternatives to avoid jeopardy. State agencies must adopt reasonable alternatives unless there are overriding social or economic conditions that make such alternatives infeasible. For projects causing incidental take, DFG is required to specify reasonable and prudent measures to minimize take. Any take that results from activities that are carried out in compliance with these measures is not prohibited.

Many California species are both federally listed and State listed. CESA directs DFG to coordinate with the USFWS and NMFS in the consultation process so that consistent and compatible opinions or findings can be adopted by both federal and State agencies.

Natural Community Conservation Planning

Adopted in 1991, California's Natural Community Conservation Planning Act establishes a program to identify the habitat needs of species before they become listed as threatened or endangered, and to develop appropriate voluntary conservation methods compatible with development and growth. Participants in the program develop plans to protect certain habitat and will ultimately enter into agreements with DFG to ensure that the plans will be carried out. Plans must be created so that they are consistent with endangered species laws.

Dredge and Fill Permits

Section 404 of the federal Clean Water Act regulates the discharge of dredged and fill materials into waters of the United States, including wetlands. The term "discharge of dredged and fill material" has been defined broadly to include the construction of any structure involving rock, soil, or other construction material. No discharge may occur unless a permit is obtained from the US Army Corps of Engineers (USACE). Generally, the project proponent must agree to mitigate or have plans to mitigate environmental impacts caused by the project before a permit is issued. The EPA has the authority to veto permits issued by the USACE for projects that have unacceptable adverse effects on municipal water supplies, fisheries, wildlife, or recreational areas.

Section 404 allows the issuance of a general permit on a state, regional, or nationwide basis for certain categories of activities that will cause only minimal environmental effects. Such activities are permitted without the need of an individual permit application. Installation of a stream gaging station along a river levee is one example of an activity that falls within a nationwide permit.

The USACE also administers a permitting program under Section 10 of the 1899 Rivers and Harbors Act. Section 10 generally requires a permit for obstructions to navigable water. The scope of the permit under Section 10 is narrower than under Section 404 since the term "navigable waters" is more limited than "waters of the United States."

The majority of water development projects must comply with Section 404, Section 10, or both.

Public Interest Terms and Conditions

The Water Code authorizes the SWRCB to impose public interest terms and conditions to conserve the public interest, specifically the consideration of instream beneficial uses, when it issues permits to appropriate water.

Local General Plans and Specific Plans

Local (city and county) general plans and specific plans provide methods to manage and protect fish and wildlife. The Conservation element of a plan provides direction and objectives for the conservation, development and use of natural resources. The Open-Space element of a plan guides the comprehensive, long-range preservation and conservation of open space lands including water bodies.

Releases of Water for Fish

Fish and Game Code Section 5937 provides protection to fisheries by requiring that the owner of any dam allow sufficient water at all times to pass through the dam to keep in good condition any fisheries that may be planted or exist below the dam. In California Trout, Inc. v. the State Water Resources Control Board (1989), the court determined that Fish and Game Code sections 5937 and 5946 required the SWRCB to modify the permits and licenses issued to the City of Los Angeles to appropriate water from the streams feeding Mono Lake to ensure sufficient water flows for downstream fisheries. The SWRCB reconsidered Los Angeles' permits and licenses in light of Fish and Game Code Section 5937 and the

public trust doctrine. In 1994, the SWRCB adopted D-1631, which requires Los Angeles to allow sufficient flows from the streams feeding Mono Lake to reach the lake to allow it to rise to the level of 6,391 feet in approximately twenty years.

Streambed Alteration Agreements

Fish and Game Code Sections 1601 and 1603 require that any governmental entity or private party altering a river, stream, lakebed, bottom, or channel enter into an agreement with DFG. When the project may substantially impact an existing fish or wildlife resource, DFG may require that the agreement include provisions designed to protect riparian habitat, fisheries, and wildlife. New water development projects and ongoing maintenance activities are often subject to these sections.

Migratory Bird Treaty Act

This act implements various treaties for the protection of migratory birds and prohibits the "taking" (broadly defined) of birds protected by those treaties without a permit. The Secretary of the Interior determines conditions under which a taking may occur, and criminal penalties are provided for unlawfully taking or transporting protected birds. Liability imposed by this act was one of several factors leading to the decision to close the San Luis Drain and Kesterson Reservoir.

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act expresses congressional policy to protect the quality of the aquatic environment as it affects the conservation, improvement, and enjoyment of fish and wildlife resources. Under this act, any federal agency that proposes to control or modify any body of water, or to issue a permit allowing control or modification of a body of water, must first consult with the USFWS and State wildlife officials. This requires coordination early in the project planning and environmental review processes.

CVPIA

In 1992, the Central Valley Project Improvement Act (Title 34 of PL 102-575) made significant changes to the CVP's legislative authorization, amending the project's purposes to place fish and wildlife mitigation and restoration on a par with water supply, and to place fish and wildlife enhancement on a par with power generation.

Major Provisions of CVPIA (1992)

- No new CVP water supply contracts for purposes other than fish and wildlife (with a few limited exceptions) until all environmental restoration actions specified in the act have been completed.
- Allows transfers of project water to users outside of the CVP service area, under numerous specified conditions including a right of first refusal to a proposed transfer by existing CVP water users (under the same terms and conditions specified in the proposed transfer), and a requirement that proposed transfers of more than 20 percent of a contracting agency's project water supply be subject to review and approval by the contracting agency.
- Requires DOI to develop water conservation criteria, and to review conservation plans submitted by contracting agencies pursuant to Reclamation Reform Act requirements for conformance to the CVPIA criteria. Tiered pricing is to be included in CVP water supply contracts when they are renewed. Project water supply and repayment contractors' surface water delivery systems are to be equipped with water measurement devices.
- All reasonable efforts to double, by 2002, natural production (based on 1967-91 fishery population levels) of specified anadromous fish in the Central Valley, and to implement that program. A portion of the San Joaquin River is exempted from this provision.)
- Dedication of 800 taf/yr of CVP yield to fish and wildlife purposes, and acquisition of supplemental water for meeting the fish doubling goal.
- An annual Trinity River instream flow of at least 340 taf through 1996, via releases from Lewiston Dam, with subsequent instream flow requirements to be determined by a USFWS instream flow study.
- Deliver water corresponding to existing non-firm supplies to specified federal, State, and private wildlife refuges in the Sacramento and San Joaquin Valleys. DOI is to acquire, from willing sellers, an additional increment of water supply for the wildlife areas, corresponding to their full habitat development needs. All of the supplemental water needs are to be met by 2002.
- Implementation of numerous specified environmental restoration actions, such as remedying fish passage problems at Red Bluff Diversion Dam, replenishing spawning gravel, and assisting in screening non-federal diversions.
- Preparation of specified reports and studies including a least-cost plan to replace the 800 taf/yr of project yield dedicated to environmental purposes, and an evaluation of water supply and development requirements for 120,000 acres of wetlands identified in a Central Valley Habitat Joint Venture report.
- A land retirement program, and specifies categories of land that may be acquired. San Joaquin Valley drainage-impaired lands are among the authorized categories.
- CVPIA restoration fund within the federal treasury to collect mitigation and restoration payments from project water and power users.

Water Allocation, Use and Regulation in California

Several statutes designed to set aside resources or areas to preserve their natural conditions for habitat, watershed protection, recreational, and scenic values also affect water use and management. These statutes preclude many activities, including most water development projects, within the areas set aside.

State and Federal Wild and Scenic Rivers System

In 1968, Congress passed the National Wild and Scenic Rivers Act to preserve, in their free flowing condition, rivers which possess "outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values." The act also states " . . . that the established national policy of dam and other construction at appropriate sections of rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes."

The act prohibits federal agencies from constructing, authorizing, or funding the construction of water resources projects having a direct and adverse effect on the values for which a river was designated. This restriction also applies to rivers designated for potential addition to the National Wild and Scenic Rivers System. Included in the system are most rivers protected under California's State Wild and Scenic Rivers Act; these rivers were included in the national system upon California's petition on January 19, 1981. The West Walker and East Fork Carson Rivers are not included in the federal system.

In 1972, the Legislature passed the California Wild and Scenic Rivers Act, declaring that specified rivers possess extraordinary scenic, recreational, fishery, or wildlife values, and should be preserved in a free flowing state for the benefit of the people of California. The Act declared that such use of the rivers would be the highest and most beneficial use within the meaning of Article X, Section 2 of the California Constitution. The act prohibits construction of any dam, reservoir, diversion, or other water impoundment on a designated river. Diversions needed to supply domestic water to residents of counties through which the river flows may be authorized, if the Secretary for Resources determines that the diversion will not adversely affect the river's free-flowing character. The major difference between the national and State acts is that if a river is designated wild and scenic under the State act, the Federal Energy Regulatory Commission (FERC) can still issue a license to build a dam on that river, thus overriding the State system. (See Federal Power Act later in this chapter.) This difference explains why national wild and scenic designation is often sought.

National Wilderness Act

The Wilderness Act sets up a system to protect federal land designated by Congress as a "wilderness area" and preserve it in its natural condition. Wilderness is defined as undeveloped federal land retaining its primeval character and influence without permanent improvements or human habitation. Commercial enterprise, permanent roads, motor vehicles, aircraft landings, motorized equipment, or construction of structures or installations (such as dams, diversions, conveyance facilities, and gaging stations) are prohibited within designated wilderness areas.

Watershed Management and Protection Practices

Many State and federal agencies have authority for managing and protecting watershed areas including the State Parks and Recreation system, national forest service lands, public lands administered by the Bureau of Land Management, and the national park system. Cities and Counties serve as local land management agencies that often coordinate and provide an institutional focus for watershed efforts. In

addition, local resource conservation districts and watershed groups assume active roles in management and protection for many watersheds.

Regulating Project Planning, Implementation and Mitigation

Another set of environmental statutes compels governmental agencies and private individuals to document and consider the environmental consequences of their actions. The statutes define the procedures through which governmental agencies must consider environmental factors in their decision-making process.

National Environmental Policy Act

NEPA directs federal agencies to prepare an environmental impact statement (EIS) for all major federal actions that may have a significant effect on the human environment. It states that it is the goal of the federal government to use all practicable means, consistent with other considerations of national policy, to protect and enhance the quality of the environment. It is a procedural law requiring all federal agencies to consider the environmental impacts of their proposed actions during the planning and decision-making processes.

NEPA requires preparation of an EIS to document a major Federal action that could significantly affect the quality of the human environment. An EIS includes the environmental impact of the proposed action, any adverse environmental effects which cannot be avoided should the proposal be implemented, alternatives to the proposed action, the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented. NEPA does not generally require federal agencies to adopt mitigation measures or alternatives provided in the EIS.

California Environmental Quality Act

CEQA, modeled after NEPA, requires California public agency decision-makers to document and consider the environmental impacts of their actions. It requires an agency to identify ways to avoid or reduce environmental damage, and to implement those measures where feasible. CEQA applies to all levels of California government, including the State, counties, cities, and local districts.

CEQA requires that a public agency carrying out a project with significant environmental effects prepare an environmental impact report (EIR). An EIR contains a description of the project; a discussion of the project's environmental impacts, mitigation measures, and alternatives; public comments; and the agency's responses to the comments. In other instances, a notice of exemption from the application of CEQA may also be appropriate.

CEQA imposes substantive duties on all California governmental agencies that approve projects with significant environmental impacts to adopt feasible alternatives or mitigation measures that substantially lessen these impacts, unless there are overriding reasons. When a project is subject to both CEQA and NEPA, both laws encourage the State and federal agencies to cooperate in planning the project and to prepare joint environmental documents.

Regulations for Water Use Efficiency

Article X, Section 2 of the California Constitution prohibits the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water. It also declares that the conservation and use of water "shall be exercised with a view to the reasonable and beneficial use thereof in the public interest and for the public welfare." Although provisions and requirements of the Constitution are self-executing, the Constitution states that the Legislature may enact statutes to advance its policy. Water Code Section 275 directs the Department and SWRCB to "take all appropriate proceedings or actions before executive, legislative, or judicial agencies to prevent waste or unreasonable use of water." SWRCB's Water Right Decision 1600, directing the Imperial Irrigation District to adopt a water conservation plan, is an example of an action brought under Article X, Section 2. SWRCB's authority to order preparation of such a plan was upheld in 1990 by the courts in Imperial Irrigation District v. State Water Resources Control Board. Other complaints have been pending before the Board for years including some which pose the question of whether continued irrigation of soils known to contain toxic concentrations of selenium and other contaminants constitute either reasonable or beneficial use when measured against their known impacts.

Urban Water Management Planning Act

Since 1983, this act has required urban water suppliers that serve more than 3,000 customers or more than 3,000 af/yr to prepare and adopt urban water conservation plans. The act authorizes the supplier to implement the water conservation program. The plans must contain several specified elements, including estimates of water use, identification of existing conservation measures, identification of alternative conservation measures, a schedule of implementation of actions proposed by the plan, and identification of the frequency and magnitude of water shortages. In 1991, the act was amended in response to the drought to require water suppliers to estimate water supplies available at the end of one, two, and three years, and to develop contingency plans for severe shortages. The act also requires water suppliers to review and update their plans at least once every five years. New requirements for urban water management plans are periodically passed by the State legislature (see SB 610, SB 672, and SB 1518 in Section 2.6.9).

Water Conservation in Landscaping Act

The Water Conservation in Landscaping Act required the Department, with the assistance of an advisory task force, to adopt a model water-efficient landscape ordinance. The model ordinance was adopted in August 1992, and has been codified in Title 23 of the California Code of Regulations. It establishes methods of conserving water through water budgeting plans, plant use, efficient irrigation, and auditing.

Cities and counties were required to review the model ordinance and adopt a water-efficient landscape ordinance by January 1, 1993, if they had not done so already. Alternatively, cities and counties could make a finding that such an ordinance is unnecessary due to climatic, geological, or topographic conditions, or water availability. If a city or county failed to adopt a water efficient landscape ordinance or make findings by January 31, 1993, the model ordinance became effective in that jurisdiction.

Agricultural Water Management Planning Act

Under this act, agricultural water suppliers supplying more than 50 taf of water annually were required to submit a report to the Department indicating whether a significant opportunity exists to conserve water or reduce the quantity of highly saline or toxic drainage water through improved irrigation water

management. The act provided that agricultural water suppliers who indicated that they had an opportunity to conserve water or reduce the quantity of highly saline or toxic water should prepare a water management plan and submit it to the DWR.

Agricultural Water Suppliers Efficient Management Practices Act

The Agricultural Water Suppliers Efficient Management Practices Act, adopted in 1990, required that DWR establish an advisory committee to review efficient agricultural water management practices. Under the act, DWR was required to offer assistance to agricultural water suppliers seeking to improve the efficiency of their water management practices. The committee developed a Memorandum of Understanding to implement the practices, and to establish an Agricultural Water Management Council. The advisory committee adopted the MOU in October 1996. The MOU was declared in effect in May 1997 after 15 agricultural water suppliers, representing 2 million irrigated acres, had signed. The Council was established and held its first meeting in July 1997. The Council consists of members of the agricultural and environmental communities and other interested parties with the expressed goal for water suppliers to voluntarily develop Water Management Plans and implement Efficient Water Management Practices (EWMPs) to further advance water use efficiency while maintaining and enhancing economic, environmental and social viability and sustainability of soil and crop production.

Agricultural Water Conservation and Management Act of 1992 (AB3616, Statutes of 1992)

This act gives any public agency that supplies water for agricultural use authority to institute water conservation or efficient management programs. The programs can include irrigation management services, providing information about crop water use, providing irrigation consulting services, improving the supplier's delivery system, providing technical and financial assistance to farmers, encouraging conservation through pricing of water, and monitoring.

Water Recycling Act of 1991

This act describes the environmental benefits and public safety of using recycled water as a reliable and cost-effective method of helping to meet California's water supply needs. It sets a statewide goal to recycle 700 taf/yr by the year 2000 and 1 maf/yr by 2010.

CALFED Water Use Efficiency Program

CALFED’s Water Use Efficiency Program encourages investments in water use efficiency primarily through its competitive grant/loan program.

Other Regulations

Federal Power Act. The Federal Power Act created a federal licensing system administered by the Federal Energy Regulatory Commission and required that a license be obtained for nonfederal hydroelectric projects proposing to use navigable waters or federal lands. The act contains a clause modeled after a clause in the Reclamation Act of 1902, which disclaims any intent to affect state water rights law. In a number of decisions dating back to the 1940s, the U.S. Supreme Court has attempted to interpret the clause. In some cases they have upheld states rights and in others have held that federal law prevents any state regulation of federally licensed power projects other than determining proprietary water rights. Most recently, in 1994, the U.S. Supreme Court issued a decision referred to as the Elkhorn decision or Tacoma decision (PUD No. 1 of Jefferson County and City of Tacoma v. Washington Department of Ecology) that upheld the state’s minimum instream flow requirement as a permissible condition of a Clean Water Act Section 401 certification.

Water Bonds

Voters have approved three additional major California water bonds since the last Water Plan Update:

- ***Proposition 13.*** In March 2000, California voters approved Proposition 13 (2000 Water Bond), which authorizes the State of California to sell $1.97 billion in general obligation bonds to support safe drinking, water quality, flood protection and water reliability projects throughout the State.

- ***Proposition 40.*** In March 2002, California voters approved Proposition 40, a $2.6 billion state bond measure for conservation, neighborhood parks, and coastline and watershed protection. Proposition 40 was the largest conservation bond measure ever approved in California.

- ***Proposition 50.*** In November 2002, the $3.4 billion water bond measure, the largest in California history, was approved by voters. It provides 825 million in funding for CALFED for a variety of programs, including surface water storage studies, water conveyance facilities, levee improvements, water supply reliability projects, ecosystem restoration, watershed programs, conservation and water recycling. (More on Proposition 50 is available at www.water.ca.gov/grants-loans.)

Water Plan Legislation

Legislation that is directly related to the California Water plan is listed in this article.

CALIFORNIA WATER CODE SECTION 10004-10013

DIVISION 6. CONSERVATION, DEVELOPMENT, AND UTILIZATION OF STATE WATER RESOURCES

10004. (a) The plan for the orderly and coordinated control, protection, conservation, development, and utilization of the water resources of the state which is set forth and described in Bulletin No. 1 of the State Water Resources Board entitled "Water Resources of California," Bulletin No. 2 of the State Water Resources Board entitled, "Water Utilization and Requirements of California," and Bulletin No. 3 of the department entitled, "The California Water Plan," with any necessary amendments, supplements, and additions to the plan, shall be known as "The California Water Plan."
(b) (1) The department shall update The California Water Plan on or before December 31, 2003, and every five years thereafter. The department shall report the amendments, supplements, and additions included in the updates of The California Water Plan, together with a summary of the department's conclusions and recommendations, to the Legislature in the session in which the updated plan is issued.
((2) The department shall establish an advisory committee, comprised of representatives of agricultural and urban water suppliers, local government, business, production agriculture, and environmental interests, and other interested parties, to assist the department in the updating of The California Water Plan. The department shall consult with the advisory committee in carrying out this section. The department shall provide written notice of meetings of the advisory committee to any interested person or entity that request the notice. The meetings shall be open to the public.
(3) The department shall release a preliminary draft of The California Water Plan, as updated, upon request, to interested persons and entities throughout the state for their review and comments. The department shall provide these persons and entities an opportunity to present written or oral comments on the preliminary draft. The department shall consider these comments in the preparation of the final publication of The California Water Plan, as updated.

10004.5. As part of the requirement of the department to update The California Water Plan pursuant to subdivision (b) of Section 10004, the department shall include in the plan a discussion of various strategies, including, but not limited to, those relating to the development of new water storage facilities, water conservation, water recycling, desalination, conjunctive use, and water transfers that may be pursued in order to meet the future water needs of the state. The department shall also include a discussion of the potential for alternative water pricing policies to change current and projected uses. The department shall include in the plan a discussion of the potential advantages and disadvantages of each strategy and an identification of all federal and state permits, approvals, or entitlements that are anticipated to be required in order to implement the various components of the strategy.

10004.6. (a) As part of updating The California Water Plan every five years pursuant to subdivision (b) of Section 10004, the department shall conduct a study to determine the amount of water needed to meet

the state's future needs and to recommend programs, policies, and facilities to meet those needs. (b) The department shall consult with the advisory committee established pursuant to subdivision (b) of Section 10004 in carrying out this section.

(c) On or before January 1, 2002, and one year prior to issuing each successive update to The California Water Plan, the department shall release a preliminary draft of the assumptions and other estimates upon which the study will be based, to interested persons and entities throughout the state for their review and comments. The department shall provide these persons and entities an opportunity to present written or oral comments on the preliminary draft. The department shall consider these documents when adopting the final assumptions and estimates for the study. For the purpose of carrying out this subdivision, the department shall release, at a minimum, assumptions and other estimates relating to all of the following:

(1) Basin hydrology, including annual rainfall, estimated unimpaired stream flow, depletions, and consumptive uses.

(2) Groundwater supplies, including estimates of sustainable yield, supplies necessary to recover overdraft basins, and supplies lost due to pollution and other groundwater contaminants.

(3) Current and projected land use patterns, including the mix of residential, commercial, industrial, agricultural, and undeveloped lands.

(4) Environmental water needs, including regulatory instream flow requirements, nonregulated instream uses, and water needs by wetlands, preserves, refuges, and other managed and unmanaged natural resource lands.

(5) Current and projected population.

(6) Current and projected water use for all of the following:

(A) Interior uses in a single-family dwelling.

(B) Exterior uses in a single-family dwelling.

(C) All uses in a multifamily dwelling.

(D) Commercial uses.

(E) Industrial uses.

(F) Parks and open spaces.

(7) Evapotranspiration rates for major crop types, including estimates of evaporative losses by irrigation practice and the extent to which evaporation reduces transpiration.

(8) Current and projected adoption of urban and agricultural conservation practices.

(9) Current and projected supplies of water provided by water recycling and reuse.

(d) The department shall include a discussion of the potential for alternative water pricing policies to change current and projected water uses identified pursuant to paragraph (6) of subdivision (c).

(e) Nothing in this section requires or prohibits the department from updating any data necessary to update The California Water Plan pursuant to subdivision (b) of Section 10004.

10005. (a) It is hereby declared that the people of the state have a primary interest in the orderly and coordinated control, protection, conservation, development, and utilization of the water resources of the state by all individuals and entities and that it is the policy of the state that The California Water Plan, with any necessary amendments, supplements, and additions to the plan, is accepted as the master plan which guides the orderly and coordinated control, protection, conservation, development, management and efficient utilization of the water resources of the state.

(b) The declaration set forth in subdivision (a) does not constitute approval for the construction of specific projects or routes for transfer of water, or for financial assistance, by the state, without further legislative action, nor shall the declaration be construed as a prohibition of the development of the water

resources of the state by any entity.

10005.1. The department or, at the department's request, the California Water Commission, shall conduct a series of hearings with interested persons, organizations, local, state, and federal agencies, and representatives of the diverse geographical areas and interests of the state.

10005.2. Prior to holding a hearing pursuant to Section 10005.1, the department shall give notice by mail of the hearing to persons and entities which have requested notice and have provided their name and address to the department.

10006. The provisions of this part do not repeal or modify any of the provisions of Part 3 of this division.

10007. Notwithstanding anything contained in this part, all applications heretofore filed by the Department of Finance or by the Department of Water Resources under Part 2 of Division 6 shall remain valid and shall retain and have the status and priority accorded to such applications as now or hereafter provided in said Part 2.

10008. The Legislature hereby finds and declares that agreements which provide for the transfer of water from the federal Central Valley Project to public entities supplying water for domestic or irrigation use offer potential benefits to California's hard-pressed farmers and to California's water-dependent urban areas. It is the intent of the Legislature that these contracts be entered into for the purposes of strengthening California's economy, serving the public, and protecting the environment.

The director shall continue to pursue negotiations with the United States Bureau of Reclamation to contract for the interim rights to stored water from the federal Central Valley Project for use in the State Water Resources Development System by state water supply contractors.

10009. The director shall pursue discussions with the United States Bureau of Reclamation to permit persons and public entities which have entitlements to water from the federal Central Valley Project, to enter into legally binding contracts with any public entity which supplies water for domestic use, irrigation use, or environmental protection in this state for the transfer of federal water entitlements during times of shortage.

10011. (a) In preparing the California Water Plan, the director shall conduct at least one public hearing within the boundaries of the Sacramento-San Joaquin Delta, and shall solicit the comments of water agencies within the delta, agricultural groups representative of delta agricultural activity, environmental groups concerned with protecting delta wildlife habitat, and groups representative of those who utilize water exported from the delta.

(b) The California Water Plan shall include a discussion of various alternatives, including their advantages and disadvantages, for improving and protecting the current uses and configuration of the Sacramento-San Joaquin Delta.

(c) Subdivisions (a) and (b) shall be implemented only to the extent money is appropriated in the annual Budget Act to carry out this section.

10013. (a) The department, as a part of the preparation of the department's Bulletin 160-03, shall include in the California Water Plan a report on the development of regional and local water projects within each hydrologic region of the state, as described in the department's Bulletin 160-98, to improve water supplies to meet municipal, agricultural, and environmental water needs and minimize the need to import water

from other hydrologic regions. The report shall include, but is not limited to, regional and local water projects that use technologies for desalting brackish groundwater and ocean water, reclaiming water for use within the community generating the water to be reclaimed, the construction of improved potable water treatment facilities so that water from sources determined to be unsuitable can be used, and the construction of dual water systems and brine lines, particularly in connection with new developments and when replacing water piping in developed or redeveloped areas.

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SB (1341) Burton Bill

Following the publishing of the last California Water Plan update in 1998, the Legislature asked DWR to make public all assumptions and estimates that will be used in the next update.

Sen. John Burton carried the legislation that was enacted in 2000 (SB1341 can be found here). It requires a report about the update's assumptions and estimates: this Web site.

At a minimum, the law says, the A&E Report will include information on all water categories specified by the California Water Code. Those categories can be found in the Burton Bill table.

Text of SB 1341 (Burton Bill)

BILL NUMBER: SB 1341 CHAPTERED

BILL TEXT

CHAPTER 720

FILED WITH SECRETARY OF STATE SEPTEMBER 27, 2000

APPROVED BY GOVERNOR SEPTEMBER 25, 2000

PASSED THE SENATE AUGUST 31, 2000

PASSED THE ASSEMBLY AUGUST 30, 2000

AMENDED IN ASSEMBLY AUGUST 7, 2000

AMENDED IN SENATE JULY 5, 2000

AMENDED IN SENATE MAY 30, 2000

AMENDED IN SENATE APRIL 24, 2000

INTRODUCED BY Senator Burton

(Coauthor: Assembly Member Machado)

JANUARY 10, 2000

An act to amend Sections 10004 and 10004.5 of, and to add Section 10004.6 to, the Water Code, relating to water.

LEGISLATIVE COUNSEL'S DIGEST

SB 1341, Burton. Water resources.

Under existing law, the Department of Water Resources operates the State Water Project and exercises specified water planning functions. Existing law requires the department to update The California Water Plan, which is a plan for the conservation, development, and use of the water resources of the state, every 5 years. This bill would require the department to update The California Water Plan on or before December 31 2003, and every 5 years thereafter. The bill would require the department to provide written notice to interested persons of meetings of a prescribed advisory committee that assists the department in updating The California Water Plan. The bill would require the department to include in the California Water Plan a discussion of the potential for alternative water pricing policies, as prescribed. The bill would require the department, as part of updating The California Water Plan, to conduct a study to determine the amount of water needed to meet the state's future needs and to recommend programs, policies, and facilities to meet those needs, as prescribed. The bill would require the department, by

January 1, 2002, and one year prior to issuing each successive update to The California Water Plan, to release a preliminary draft of the assumptions and estimates upon which the study will be based. The bill would make related findings and declarations.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. The Legislature finds and declares all of the following:

(a) A long-term, reliable supply of water is essential to protect and enhance California's natural resources and economic climate.

(b) While the Department of Water Resources has projected that Californians will experience chronic water shortages in the future, the Legislature has heard credible testimony from a number of different interest groups calling into question the accuracy of those estimates.

(c) Without credible and accurate estimates of water supply needs, it is impossible to ensure that water programs, policies, and investments are appropriate to meet all residential, commercial, industrial, agricultural, and environmental needs.

(d) CALFED's recent hearings on its draft environmental documents showed that there are widely disparate views on the role additional surface water storage should play in meeting the state's future water needs. Some argue that the state's water needs can all be met through water conservation, reuse, and other nonstructural methods. Others argue that to protect current and future uses of water, additional surface storage is essential.

(e) To reconcile these views, and to ensure the state makes appropriate investments in water programs, policies, and facilities, there needs to be a credible and objective assessment of the state's future water supply needs.

SEC. 2. Section 10004 of the Water Code is amended to read:

10004. (a) The plan for the orderly and coordinated control, protection, conservation, development, and utilization of the water resources of the state which is set forth and described in Bulletin No. 1 of the State Water Resources Board entitled "Water Resources of California," Bulletin No. 2 of the State Water Resources Board entitled, "Water Utilization and Requirements of California," and Bulletin No. 3 of the department entitled, "The California Water Plan," with any necessary amendments, supplements, and additions to the plan, shall be known as "The California Water Plan."

(b) (1) The department shall update The California Water Plan on or before December 31, 2003, and every five years thereafter. The department shall report the amendments, supplements, and additions included in the updates of The California Water Plan, together with a summary of the department's conclusions and recommendations, to the Legislature in the session in which the updated plan is issued.

(2) The department shall establish an advisory committee, comprised of representatives of agricultural and urban water suppliers, local government, business, production agriculture, and environmental interests, and other interested parties, to assist the department in the updating of The California Water Plan. The department shall consult with the advisory committee in carrying out this section. The department shall provide written notice of meetings of the advisory committee to any interested person or entity that request the notice. The meetings shall be open to the public. (3) The department shall release a preliminary draft of The California Water Plan, as updated, upon request, to interested persons and entities throughout the state for their review and comments. The department shall provide these persons and entities an opportunity to present written or oral comments on the preliminary draft. The department shall consider these comments in the preparation of the final publication of The California Water Plan, as updated.

SEC. 3. Section 10004.5 of the Water Code is amended to read:

10004.5. As part of the requirement of the department to update The California Water Plan pursuant to subdivision (b) of Section 10004, the department shall include in the plan a discussion of various

strategies, including, but not limited to, those relating to the development of new water storage facilities, water conservation, water recycling, desalination, conjunctive use, and water transfers that may be pursued in order to meet the future water needs of the state. The department shall also include a discussion of the potential for alternative water pricing policies to change current and projected uses. The department shall include in the plan a discussion of the potential advantages and disadvantages of each strategy and an identification of all federal and state permits, approvals, or entitlements that are anticipated to be required in order to implement the various components of the strategy.

SEC. 4. Section 10004.6 is added to the Water Code, to read:

10004.6. (a) As part of updating The California Water Plan every five years pursuant to subdivision (b) of Section 10004, the department shall conduct a study to determine the amount of water needed to meet the state's future needs and to recommend programs, policies, and facilities to meet those needs.

(b) The department shall consult with the advisory committee established pursuant to subdivision (b) of Section 10004 in carrying out this section.

(c) On or before January 1, 2002, and one year prior to issuing each successive update to The California Water Plan, the department shall release a preliminary draft of the assumptions and other estimates upon which the study will be based, to interested persons and entities throughout the state for their review and comments. The department shall provide these persons and entities an opportunity to present written or oral comments on the preliminary draft. The department shall consider these documents when adopting the final assumptions and estimates for the study. For the purpose of carrying out this subdivision, the department shall release, at a minimum, assumptions and other estimates relating to all of the following:

(1) Basin hydrology, including annual rainfall, estimated unimpaired stream flow, depletions, and consumptive uses.

(2) Groundwater supplies, including estimates of sustainable yield, supplies necessary to recover overdraft basins, and supplies lost due to pollution and other groundwater contaminants.

(3) Current and projected land use patterns, including the mix of residential, commercial, industrial, agricultural, and undeveloped lands.

(4) Environmental water needs, including regulatory instream flow requirements, nonregulated instream uses, and water needs by wetlands, preserves, refuges, and other managed and unmanaged natural resource lands.

(5) Current and projected population.

(6) Current and projected water use for all of the following:

(A) Interior uses in a single-family dwelling.

(B) Exterior uses in a single-family dwelling.

(C) All uses in a multifamily dwelling.

(D) Commercial uses.

(E) Industrial uses.

(F) Parks and open spaces.

(7) Evapotranspiration rates for major crop types, including estimates of evaporative losses by irrigation practice and the extent to which evaporation reduces transpiration.

(8) Current and projected adoption of urban and agricultural conservation practices.

(9) Current and projected supplies of water provided by water recycling and reuse.

(d) The department shall include a discussion of the potential for alternative water pricing policies to change current and projected water uses identified pursuant to paragraph (6) of subdivision (c).

(e) Nothing in this section requires or prohibits the department from updating any data necessary to update The California Water Plan pursuant to subdivision (b) of Section 10004.

SB (672) Machado Bill

SB 672 requires the state to include in the California Water Plan, which is prepared every five years, a report on the development of regional and local water projects, within each hydrologic region. Projects that use technologies such as desalinization, reclamation, and recycling will be included in the report. This is important because the capability of better utilizing all water sources, such as rainfall, snow melt, surface water, groundwater, ocean water or reclaimed wastewater, is a reality that can help these regions meet their own water needs without having to look elsewhere for water supplies.

BILL NUMBER: Senate Bill 672 CHAPTERED

BILL TEXT

CHAPTER 320

FILED WITH SECRETARY OF STATE SEPTEMBER 20, 2001

APPROVED BY GOVERNOR SEPTEMBER 19, 2001

PASSED THE SENATE SEPTEMBER 4, 2001

PASSED THE ASSEMBLY AUGUST 30, 2001

AMENDED IN ASSEMBLY JULY 14, 2001

AMENDED IN ASSEMBLY JULY 3, 2001

AMENDED IN SENATE JUNE 4, 2001

AMENDED IN SENATE APRIL 16, 2001

INTRODUCED BY Senator Machado

FEBRUARY 23, 2001

An act to amend Section 10620 of, and to add Section 10013 to, the Water Code, relating to water.

LEGISLATIVE COUNSEL'S DIGEST

SB 672, Machado. California Water Plan: urban water management plans.

(1) Existing law requires the Department of Water Resources to update every 5 years the plan for the orderly and coordinated control, protection, conservation, development, and use of the water resources of the state, known as the California Water Plan. This bill would require the department to include in the California Water Plan a report on the development of regional and local water projects within each hydrologic region of the state to improve water supplies to meet municipal, agricultural, and environmental water needs and minimize the need to import water from other hydrologic regions.

(2) Existing law requires every urban water supplier to prepare and adopt an urban water management plan. This bill would require an urban water supplier to describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. The Legislature finds and declares all of the following:

(a) The Department of Water Resources, through its contracts for delivery of water from the State Water Project, has established water entitlement objectives for approximately 4,200,000 acre feet.

(b) Municipal, agricultural, and environmental water needs have increased beyond levels anticipated in the California Water Plan and the State Water Project has not developed water projects that will yield the quantity of water established as water entitlement objectives.

(c) The health, safety, and well-being of the people of California will best be served by meeting the municipal, agricultural, and environmental water needs of each hydrologic region to the maximum extent practicable without diminishing the resources of other regions that are necessary to meet the present and future municipal, agricultural, and environmental needs of those regions, and while recognizing the

continuing need in the foreseeable future to move surplus supplies between regions in order to meet the municipal, agricultural, and environmental needs of the people of California.
(d) The health, safety, and well-being of the people of the State of California will best be served by employing current and developing water treatment and conservation technologies and by implementing the principles set forth in the Cobey-Porter Saline Water Conservation Law (Chapter 9 (commencing with Section 12945) of Part 6 of Division 6 of the Water Code) to the maximum extent practicable.
SEC. 2. Section 10013 is added to the Water Code, to read:
10013. (a) The department, as a part of the preparation of the department's Bulletin 160-03, shall include in the California Water Plan a report on the development of regional and local water projects within each hydrologic region of the state, as described in the department's Bulletin 160-98, to improve water supplies to meet municipal, agricultural, and environmental water needs and minimize the need to import water from other hydrologic regions. The report shall include, but is not limited to, regional and local water projects that use technologies for desalting brackish groundwater and ocean water, reclaiming water for use within the community generating the water to be reclaimed, the construction of improved potable water treatment facilities so that water from sources determined to be unsuitable can be used, and the construction of dual water systems and brine lines, particularly in connection with new developments and when replacing water piping in developed or redeveloped areas.
SEC. 3. Section 10620 of the Water Code is amended to read:
10620. (a) Every urban water supplier shall prepare and adopt an urban water management plan in the manner set forth in Article 3 (commencing with Section 10640).
(b) Every person that becomes an urban water supplier shall adopt an urban water management plan within one year after it has become an urban water supplier.
(c) An urban water supplier indirectly providing water shall not include planning elements in its water management plan as provided in Article 2 (commencing with Section 10630) that would be applicable to urban water suppliers or public agencies directly providing water, or to their customers, without the consent of those suppliers or public agencies.
(d) (1) An urban water supplier may satisfy the requirements of this part by participation in areawide, regional, watershed, or basinwide urban water management planning where those plans will reduce preparation costs and contribute to the achievement of conservation and efficient water use.
(2) Each urban water supplier shall coordinate the preparation of its plan with other appropriate agencies in the area, including other water suppliers that share a common source, water management agencies, and relevant public agencies, to the extent practicable.
(e) The urban water supplier may prepare the plan with its own staff, by contract, or in cooperation with other governmental agencies.
(f) An urban water supplier shall describe in the plan water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions.

SB (1062) Poochigian Bill

Senate Bill 1062 by Sen. Charles Poochigian requires the Department of Water Resources (DWR) to include various strategies for meeting the state's water supply needs in its updates to the California Water Plan. It also establishes an advisory committee to help DWR update the plan.

SB 1062 describes California's need for reliable water supplies, estimates of expected population growth, and the integral role water conservation, recycling, conjunctive use, desalination, and water storage play in meeting those needs.

SB 1062 requires DWR to include a discussion of various strategies and the potential advantages and disadvantages of the strategies that may be pursued in meeting the state's water supply needs in its update of Bulletin 160. Additionally the update must identify all federal and state permits, approvals or entitlements that might be required in order to implement the strategies. This narrative will serve as the basis for future informed discussions and decisions regarding California's water plan.
Finally, SB 1062 requires DWR to establish an advisory committee, comprised of representatives of agricultural and urban water suppliers, local government, business, production agriculture, environmental interests, and other interested parties, to assist in the updating of Bulletin 160.

BILL NUMBER: SB 1062 CHAPTERED

BILL TEXT

CHAPTER 210

FILED WITH SECRETARY OF STATE JULY 28, 1999

APPROVED BY GOVERNOR JULY 27, 1999

PASSED THE ASSEMBLY JULY 15, 1999

PASSED THE SENATE MAY 24, 1999

AMENDED IN SENATE APRIL 27, 1999

AMENDED IN SENATE APRIL 13, 1999

INTRODUCED BY Senator Poochigian

FEBRUARY 26, 1999

An act to amend Section 10004 of, and to add Section 10004.5 to, the Water Code, relating to water.

LEGISLATIVE COUNSEL'S DIGESTS

B 1062, Poochigian. The California Water Plan.

Existing law requires the Department of Water Resources to update, every 5 years, The California Water Plan, which is the plan for the control, protection, conservation, development, and utilization of the water resources of the state.
This bill would require the department to establish a prescribed advisory committee to assist the department in the updating of the plan. The bill would require the department, in connection with the updating of the plan, to include in the plan a discussion of various strategies, including those strategies relating to the development of new water storage facilities, water conservation and recycling, desalination, conjunctive use, and water transfers, that may be pursued to meet the future water needs of the state, as prescribed. The bill would make related legislative findings and declarations.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. The Legislature finds and declares all of the following:
(a) A long-term, reliable supply of water is essential to protect the productivity of California's businesses and economic climate.(b) The Department of Finance projects that California's population will increase to over 47 million persons by 2020, increasing the need for the development of additional safe and reliable water supplies that are critical to the health, safety, and welfare of all Californians, including the state's future generations.(c) Water-related infrastructure investment needs are growing rapidly as a result of a growing population and economy, environmental and public health requirements, and aging water delivery systems.
(d) The Department of Water Resources projects that Californians will experience chronic water shortages, as early as 2000, unless actions are taken to increase the amount of developed water available for use in California.

(e) Water conservation, water recycling, voluntary water transfers, conjunctive use, and desalination programs and projects will continue to be an integral part of California's water management strategy.(f) The review, planning, and development of new water storage facilities and the renewed operation or enlargement of existing water storage facilities should be pursued to ensure that a reliable, high quality supply of water is available to meet the current and future needs of all beneficial uses of water, including urban, agricultural, and environmental uses.
SEC. 2. Section 10004 of the Water Code is amended to read:
10004. (a) The plan for the orderly and coordinated control, protection, conservation, development, and utilization of the water resources of the state which is set forth and described in Bulletin No. 1 of the State Water Resources Board entitled "Water Resources of California," Bulletin No. 2 of the State Water Resources Board entitled, "Water Utilization and Requirements of California," and Bulletin No. 3 of the department entitled, "The California Water Plan," with any necessary amendments, supplements, and additions to the plan, shall be known as "The California Water Plan."
(b) (1) The department shall update The California Water Plan every five years. The department shall report the amendments, supplements, and additions included in the updates of The California Water Plan, together with a summary of the department's conclusions and recommendations, to the Legislature in the session in which the updated plan is issued.(2) The department shall establish an advisory committee, comprised of representatives of agricultural and urban water suppliers, local government, business, production agriculture, and environmental interests, and other interested parties, to assist the department in the updating of The California Water Plan. The department shall consult with the advisory committee in carrying out this section.
(3) The department shall release a preliminary draft of The
California Water Plan, as updated, upon request, to interested persons and entities throughout the state for their review and comments. The department shall provide these persons and entities an opportunity to present written or oral comments on the preliminary draft. The department shall consider these comments in the preparation of the final publication of The California Water Plan, as updated.
SEC. 3. Section 10004.5 is added to the Water Code, to read:
10004.5. As part of the requirement of the department to updateThe California Water Plan pursuant to subdivision (b) of Section
10004, the department shall include in the plan a discussion of various strategies, including, but not limited to, those relating to the development of new water storage facilities, water conservation, water recycling, desalination, conjunctive use, and water transfers that may be pursued in order to meet the future water needs of the state. The department shall include in the plan a discussion of the potential advantages and disadvantages of each strategy and an identification of all federal and state permits, approvals, or entitlements that are anticipated to be required in order to implement the various components of the strategy.

AB (2587) Matthews Bill

AB 2587 requires the California Department of Water Resources to consider scenarios in the California Water Plan Update that are consistent with substantial continued agricultural production in California. A key phrase in the law is that "neither the state nor the nation should be allowed to become dependent upon a net import of foreign food." In particular, the law specifies that DWR consider scenarios under which agricultural production in California is sufficient to assure that California is a net food exporter and that the net shipments out of state are enough to cover 25 percent of "table food" use in United States plus "growth in export markets." The 25 percent share is taken to be the traditional share from California.
Text of AB 2587 (Matthews Bill)

BILL NUMBER: AB 2587 CHAPTERED
BILL TEXT
CHAPTER 615
FILED WITH SECRETARY OF STATE SEPTEMBER 17, 2002
APPROVED BY GOVERNOR SEPTEMBER 16, 2002
PASSED THE ASSEMBLY AUGUST 28, 2002
PASSED THE SENATE AUGUST 27, 2002
AMENDED IN SENATE AUGUST 5, 2002
AMENDED IN ASSEMBLY MAY 23, 2002
AMENDED IN ASSEMBLY MAY 1, 2002
AMENDED IN ASSEMBLY APRIL 18, 2002
INTRODUCED BY Assembly Member Matthews
FEBRUARY 21, 2002
An act to add Section 411 to the Food and Agricultural Code, relating to food.

LEGISLATIVE COUNSEL'S DIGEST

AB 2587, Matthews. Food: water usage forecasts.
Existing law establishes the Department of Food and Agriculture and charges it with various duties and obligations.
This bill would require the Department of Food and Agriculture to estimate food, fiber, livestock, and other farm products production, as specified, and provide that information to the Department of Water Resources for estimating related water usage, and the Chairs of the Assembly Committee on Agriculture, the Assembly Committee on Water, Parks, and Wildlife, and the Senate Committee on Agriculture and Water Resources, as specified, for inclusion in a bulletin by the Department of Water Resources estimating the state's water needs.
This bill would also state the intent of the Legislature in regard to that bulletin.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. It is the intent of the Legislature that the food forecasts made by the Department of Food and Agriculture and the Department of Water Resources shall include the following considerations:
(1) Neither the state nor the nation should be allowed to become dependent upon a net import of foreign food.
(2) As the nation's population grows, California should produce enough food to supply the state and also continue to supply the historical proportion of the nation's food supply, approximately 25 percent of the nation's table food.
(3) Countries such as Japan are heavily dependent on imported food, some of which comes from California. California is also called

upon to ship food to prevent famines and to protect our national interest by providing food to maintain stability elsewhere in the world. Consideration should be given to maintaining the state's ability to meet these export needs.
SEC. 2. Section 411 is added to the Food and Agricultural Code, to read:
411. (a) The Department of Food and Agriculture shall supply the Department of Water Resources with a forecast that estimates the amount of production of food, fiber, livestock, and other farm products.
(b) As part of the forecast, the Department of Food and Agriculture's assumptions shall be based upon 20-year estimates that include, but are not limited to, the following data:
(1) Land use conversion rates and the amount of land available for agricultural production.
(2) The growing need for food, fiber, livestock and other farm products as the state's and the nation's populations grow.
(3) Implementation of irrigation technology and other on-farm water conservation measures.
(4) Advances in crop yields and production techniques.
(5) Alternate uses of crops.
(c) The department shall include an additional table in the forecast that estimates the agricultural water needs based upon food security considerations that include, at a minimum, the following:
(1) Population growth estimates.
(2) Production of farm products sufficient to feed the state's population, as well as continue to provide at least 25 percent of the nation's table food.
(3) Production necessary to meet the growth in export markets.
(d) To the extent feasible, the Department of Food and Agriculture may cooperate with the Department of Finance, the University of California, and other institutions and organizations in obtaining information for the forecasts.
(e) The Department of Food and Agriculture shall furnish the forecast to the Department of Water Resources for estimating related water usage, as well as to the Chairs of the Assembly Committee on Agriculture, the Assembly Committee on Water, Parks, and Wildlife, and the Senate Committee on Agriculture and Water Resources. The Department of Water Resources shall include this information in Bulletin 160.

Bagley-Keene Open Meeting Act

The Bagley-Keene Open Meeting Act governs notice and open meeting requirements for state bodies and is given as it appeared on January 1, 2002. The state body that meets and deliberates about the California Water Plan Update 2003 is our 70-member Advisory Committee.

The act declares, "It is the public policy of this state that public agencies exist to aid in the conduct of the people's business and the proceedings of public agencies be conducted openly so that the public may remain informed."

Work Plan for Meeting Legal Requirements For The California Water Plan (Water Code Sections 10004-10011)

(Requirements are listed in chronological order by scheduled completion date)

Water Code Section	Description	Completion Date
10004. (b) (2).	The department shall establish and consult with an advisory committee, comprised of representatives of agricultural and urban water suppliers, local government, business, production agriculture, and environmental interests, and other interested parties, to assist the department in the updating of The California Water Plan.	Done – Jan. 2001
10004.6. (c).	On or before January 1, 2002, and one year prior to issuing each successive update to The California Water Plan, the department shall release a preliminary draft of the assumptions and other estimates upon which the study will be based, to interested persons and entities throughout the state for their review and comments. The department shall provide these persons and entities an opportunity to present written or oral comments on the preliminary draft.	Preliminary Draft – Released Dec. 2001 (see attached table for details) Done – 4 Workshops for Extended Review Forum Spring 2002
10004. (b) (1).	The department shall update The California Water Plan on or before December 31, 2003, and every five years thereafter.	Phase 1 – Aug. 2004 Public Review Draft Phase 2 – Jan. 2005 Final Water Plan
10004. (b) (3).	The department shall release a preliminary draft of The California Water Plan, as updated, upon request, to interested persons and entities throughout the state for their review and comments. The department shall provide these persons and entities an opportunity to present written or oral comments on the preliminary draft. The department shall consider these comments in the preparation of the final publication of The California Water Plan, as updated.	Phase 1 – Aug. 2004 Public Review Draft Phase 2 – Sept/Oct. 2004 Public Hearings Phase 2 – Jan. 2005 Final Water Plan
10004.5.	The department shall include in the plan a discussion of various strategies, including, but not limited to, those relating to the development of new water storage facilities, water conservation, water recycling, desalination, conjunctive use, and water transfers that may be pursued in order to meet the future water needs of the state.	Phase 1 – Aug. 2004 (using available information for 25 resource management strategies)
10004.5.	The department shall include an identification of all federal and state permits, approvals, or entitlements that are anticipated to be required in order to implement the various components of the strategy.	Phase 1 – Aug. 2004 Public Review Draft Phase 2 – Jan. 2005 Final Water Plan
10004.6 (a).	As part of updating The California Water Plan every five years, the department shall conduct a study to determine the amount of water needed to meet the state's future needs and….	Phase 1 – Aug. 2004 (using available information) Phase 3 – July 2006 (using new studies)

Work Plan for Meeting Legal Requirements For The California Water Plan

Water Code Section	Description	Completion Date
10004.6 (a).	As part of updating The California Water Plan every five years, the department shall...recommend programs, policies, and facilities to meet future needs.	Phase 1 – Aug. 2004 (using available information for 25 resource management strategies) Phase 3 – July 2006 (using new studies)
10004.6 (a).	The department shall consult with the advisory committee established pursuant to subdivision (b) of Section 10004 in carrying out this Section 10004.6 (a): determining future needs and recommending programs, policies, and programs to meet those needs.	Phase 1 – Aug. 2004 (using available information) Phase 2 – Dec. 2005 (selection of Data and Analytical Tools) Phase 3 – July 2006 (conduct new studies)
10011. (b).	The California Water Plan shall include a discussion of various alternatives, including their advantages and disadvantages, for improving and protecting the current uses and configuration of the Sacramento-San Joaquin Delta.	Phase 1 – Aug. 2004 (using available information for 25 resource management strategies and CALFED input) Phase 2 – Jan. 2005 Final Water Plan
10013.	The department, as a part of the preparation of the department's Bulletin 160-03, shall include in the California Water Plan a report on the development of regional and local water projects within each hydrologic region of the state, as described in the department's Bulletin 160-98, to improve water supplies to meet municipal, agricultural, and environmental water needs and minimize the need to import water from other hydrologic regions.	Phase 1 – Aug. 2004 Public Review Draft (12 Regional Reports in Volume 3 based on information compiled from regional planning efforts) Phase 2 – Jan. 2005 Final Water Plna
10013.	This report shall include, but is not limited to, regional and local water projects that use technologies for desalting brackish groundwater and ocean water, reclaiming water for use within the community generating the water to be reclaimed, the construction of improved potable water treatment facilities so that water from sources determined to be unsuitable can be used, and the construction of dual water systems and brine lines, particularly in connection with new developments and when replacing water piping in developed or redeveloped areas.	Phase 1 – Aug. 2004 Public Review Draft (using available information on 25 resource management strategies) Phase 2 – Jan. 2005 Final Water Plan
10004. (b) (1).	The department shall report to the Legislature in the session in which the updated plan is issued; the amendments, supplements, and additions included in the updates of the California Water Plan, together with a summary of the department's conclusions and recommendations.	Phase 1 – Sept 2004 on Public Review Draft Phase 2 – Feb 2005 on Final Water Plan

Water Code Section	Description	Completion Date
10005.1.	The department or, at the department's request, the California Water Commission, shall conduct a series of hearings with interested persons, organizations, local, state, and federal agencies, and representatives of the diverse geographical areas and interests of the state.	Phase 2 – Sept/Oct 2004 Public Hearings
10005.2.	Prior to holding the above hearings, the department shall give notice by mail of the hearings to persons and entities which have requested notice and have provided their name and address to the department.	Phase 1 – Aug 2004 (using 2,000 public distribution list)
10011. (a).	In preparing the California Water Plan, the director shall conduct at least one public hearing within the boundaries of the Sacramento-San Joaquin Delta, and shall solicit the comments of water agencies within the delta, agricultural groups representative of delta agricultural activity, environmental groups concerned with protecting delta wildlife habitat, and groups representative of those who utilize water exported from the delta.	Phase 2 – Dec 2005
10004.6. (d).	The department shall include a discussion of the potential for alternative water pricing policies to change current and projected water uses identified pursuant to item (6) above.	Phase 1 – Aug. 2004 Public Review Draft (Narrative on Economic Incentives -Loans, Grants and Water Pricing) Phase 2 – Jan. 2005 Final Water Plan
Food and Agricultural Code Section 411	(a) The Department of Food and Agriculture shall supply the Department of Water Resources with a forecast that estimates the amount of production of food, fiber, livestock, and other farm products. (e) The Department of Food and Agriculture shall furnish the forecast to the Department of Water Resources for estimating related water usage, as well as to the Chairs of the Assembly Committee on Agriculture, the Assembly Committee on Water, Parks, and Wildlife, and the Senate Committee on Agriculture and Water Resources. The Department of Water Resources shall include this information in Bulletin 160.	Phase 1 – Aug. 2004 Public Review Draft Agricultural Issue Center Study Report (Interim response until DWR receives CDFA food forecast) Phase 3 – July 2006 Water Plan Update 2008 (assumes DWR receives CDFA food forecast)

Schedule for Assumptions and Estimates Specified In the California Water Code Section 10004.6

For Current Conditions

Water Code Section	Description	Statewide Result Regional Results can be found on Assumptions and Estimates Web Site www.waterplan.water.ca.gov/A&E			Completion Date
10004.6. (c).	The department shall release, at a minimum, assumptions and other estimates relating to all of the following:	1998	2000	2001	
10004.6. (c) (1).	Basin hydrology:				Phase 1 – Aug. 2004 Water Portfolio Data for 1998, 2000, 2001 (with some data gaps)
	Annual rainfall	329.6 maf	187.7 maf	139.2 maf	
	Unimpaired runoff [I]	31.4+10.4 = 41.8 maf	18.9+5.9 = 24.8 maf	19.2+4.9 = 24.1 maf	
	Depletions [II]	90.8 maf	49.7maf	27.0 maf	
	Consumptive uses [III]	19.7 maf	25.1 maf	25.1 maf	
10004.6. (c) (2).	Groundwater supplies[IV]:				Phase 1 – Aug 2004 Public Review Draft (using available data) Phase 3 – Work on data gaps Water Plan Update 2008
	Sustainable yield estimates	N/A [V]	N/A	N/A	
	Overdraft recovery needs [VI] (annual GW deficit is shown)	1-2 maf	4-5 maf	9-10 maf	
	Supplies lost to groundwater pollution	N/A	N/A	N/A	
10004.6. (c) (3).	Current land use patterns [VII]:				Phase 1 – Aug 2004 Public Review Draft (using available data) Phase 3 – Work on data gaps Water Plan Update 2008
	Residential	N/A	N/A	N/A	
	Commercial	N/A	N/A	N/A	
	Industrial	N/A	N/A	N/A	
	Agricultural [VIII]	9.3 million acres	9.0 million acres	8.7 million acres	
	Undeveloped lands	N/A	N/A	N/A	
10004.6. (c) (4).	Environmental water needs:				Phase 1 – Aug 2004 Public Review Draft (using available data) Phase 3 – Work on data gaps Water Plan Update 2008
	Regulated instream flow requirements [IX]	6.9 maf	7.5 maf	6.9 maf	
	Nonregulated instream flows	N/A	N/A	N/A	
	Wetlands and refuge needs [X]	1.4 maf	1.5 maf	1.3 maf	
	Managed natural resource lands	N/A	N/A	N/A	
	Unmanaged natural resource lands	N/A	N/A	N/A	

Water Code Section	Description	Statewide Result Regional Results can be found on Assumptions and Estimates Web Site www.waterplan.water.ca.gov/A&E			Completion Date
		1998	*2000*	*2001*	
10004.6. (c) (5).	Current population [xi]:	32.9 million people	34.1 million people	34.8 million people	Phase 1 – August 2004
10004.6. (c) (6).	Current Urban water needs [xii]:				Phase 1 – Aug 2004 Public Review Draft (using available data) Phase 3–Work on data gaps Water Plan Update 2008
	Interior uses, single family dwelling	1.7 maf	2.0 maf	2.0 maf	
	Exterior uses, single family dwelling	1.8 maf	2.0 maf	2.0 maf	
	Multifamily dwelling, all uses	1.4 maf	1.5 maf	1.5 maf	
	Commercial water uses	1.2 maf	1.6 maf	1.6 maf	
	Parks & open space uses	0.6 maf	0.7 maf	0.6 maf	
10004.6. (c) (7).	Agricultural Water	25.4 maf	31.9 maf	31.6 maf	Phase 1 – Aug 2004 Public Review Draft (using available data) Phase 3–Work on data gaps Water Plan Update 2008
	Evapotranspiration rates for major crop types	0.07-5.77 acre-ft/acre	0.11-6.37 acre-ft/acre	N/A	
	Evaporative losses by irrigation practice	N/A	N/A	N/A	
	Evaporation impact on transpiration	N/A	N/A	N/A	
10004.6. (c) (8).	Adoption of agricultural conservation practices [xiii].	See footnote 13			Phase 1 – Aug. 2004 Public Review Draft (Narrative on Agricultural Water Use Efficiency) Phase 3–Work on data gaps Water Plan Update 2008
10004.6. (c) (8).	Adoption of urban conservation practices.	Under Development in Phase 2 – 12/2005			Phase 1 – Aug. 2004 Public Review Draft (Narrative on Urban Water Use Efficiency) Phase 3–Work on data gaps Water Plan Update 2008
10004.6. (c) (9).	Water supplies from water recycling and reuse (municipal)[xiv]	Approx. 0.5 maf annually	Approx. 0.5 maf annually	Approx. 0.5 maf annually	Phase 1 – Aug. 2004 Public Review Draft Phase 3–Work on data gaps Water Plan Update 2008

For Projected Conditions

Water Code Section	Description	Scenario 1 Current Trends Continued	Scenario 2 Resource Sustainability	Scenario 3 Resource Intensive	Completion Date
10004.6. (c).	The department shall release, at a minimum, assumptions and other estimates relating to all of the following:	Estimate additional 2030 urban, agricultural and environmental water demands for this scenario			Phase 1 – Aug. 2004 Public Review Draft (Scenario 1 with available data) Phase 3 – July 2006 (new studies for all scenarios)
10004.6. (c) (3).	Projected land use patterns				Phase 2 – Dec. 2005 (Select input data, analytical tools and assumptions) Phase 3 – July 2006 (new studies for all scenarios and responses for Water Plan Update 2008)
	Residential				
	Commercial				
	Industrial				
	Agricultural				
	Undeveloped lands				
10004.6. (c) (5).	Projected population [xv]	48.1 million people			Phase 1 – August 2004
10004.6. (c) (6).	Projected urban water needs [xvi]				Phase 2 – Dec. 2005 (Select input data, analytical tools and assumptions) Phase 3 – July 2006 (new studies for all scenarios and responses for Water Plan Update 2008)
	Interior uses, single family dwelling				
	Exterior uses, single family dwelling				
	Multifamily dwelling, all uses				
	Commercial water uses				
	Parks & open space uses				
10004.6. (c) (8).	Adoption of agricultural conservation practices. [xvii]				Phase 2 – Dec. 2005 Update Agricultural Water Use Efficiency potential estimates using information from CALFED WUE Program & other studies)
10004.6. (c) (8).	Adoption of urban conservation practices.[xviii]				Phase 2 – Dec. 2005 Update Urban Water Use Efficiency potential estimates using information from CALFED WUE Program & other studies)
10004.6. (c) (9).	Water supplies from water recycling and reuse (municipal) [xix]	1.5 maf			Phase 1 – Aug. 2004 (Scenario 1 with available data)

Table Footnotes

[i] From Eight River Index

[ii] DWR, Statewide Water Balance Summary, Total Outflows to Salt Sink

[iii] DWR, Statewide Water Portfolio, Evapotranspiration of Applied Water from Agricultural, Urban and Managed Wetlands Uses

[iv] Estimates of Sustainable Yield and Supplies Lost to Groundwater Pollution are not available due to the number of variables and complexity of making such estimates

[v] Not Available

[vi] DWR, Statewide Water Balance Summary, Estimates are shown for annual groundwater deficit by year. Whereas, overdraft is a long-term measure currently estimated at between 1 maf and 2 maf per year statewide (Bulletin 118-03)

[vii] Land Use Patterns Statewide have not been compiled except for land in irrigated agricultural

[viii] Compiled by DWR staff from Land Use Surveys and Reports from County Agricultural Commissioners

[ix] DWR, Statewide Flow Diagrams, Total Required Instream Flows including flows returned to supply

[x] DWR, Statewide Water Portfolio, Managed Wetlands Applied Water

[xi] Department of Finance Projections

[xii] DWR, Statewide Water Portfolio

[xiii] DWR is not planning to develop information on which specific agricultural conservation practices are being used or to what level they are being adopted. Instead, DWR plans to ensure that the on-farm irrigation efficiencies, which are required to develop water use, are justifiable and agreed upon by the experts in the field. These irrigation efficiencies are an indicator of the level of water management, or conservation practices, being used.

[xiv] Developed from Portfolio data received from DWR Districts

[xv] Department of Finance projections – May 2004

[xvi] To be developed in Phases 2 & 3 as data are available

[xvii] To be developed in Phases 2 & 3 as data are available

[xviii] To be developed in Phases 2 & 3 as data are available

[xix] Developed from Water Portfolio data received from DWR Districts